Graphic Design
The process of combining text, graphics, and images to communicate an effective visual message.

Does it work? Does it solve the problem?

ELEMENTS OF DESIGN

Point/Line/Plane
Two connected points form a line; every line has a length, width, and direction. Line is mark or stroke used in drawing in which the length is longer than the width. The edge or outline of a form, the meeting of planes. Plane is a flat surface with height and width.

Shape
A two-dimensional line with no form or thickness. Shapes are flat and can be grouped into two categories:

Geometric
Shapes that can be drawn using a ruler or compass and produce a feeling of control or order

Organic
Shapes drawn freehand that are complex and reference found shapes found in nature

Figure/Ground
A figure is the totality of a shape while the ground is what surrounds it. The relationship between figure/ground is used in all aspects of design. It is also referred to as positive and negative space.

Space
The area activated by visual elements. A visual element such as a shape or a line can be considered space. Creating the illusion of a third dimension on a flat surface to suggest distance, area, volume; physical space independent of what occupies it; absolute space.

Color
Color aids visual organization and design. It can give emphasis to create a hierarchy, a mood, or drama. Color Theory based on the Color Wheel, stems from scientific principals relating to our understanding of light, pigment and optics. (See Color Handout for specific on Color Vocabulary)

Texture
Surface quality either tactile or visually implied by different uses of media. It is the degree of roughness or smoothness in objects.

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BASIC PRINCIPLES

Contrast
When elements in a design are noticeably different, emphasis and visual hierarchy are created. Contrast is one of the most important visual signifiers in a design. Elements, which are not exactly the same, should be deliberately and noticeably different.

Repetition
Elements in a design are used more than once to develop the organization of the piece and strengthen the visual unity. Color, shape, texture, spatial relationships, line thicknesses, sizes, fonts, etc. are all elements, which can be used repetitively.

Alignment
Every element of a design should have a visual connection in relationship to the other parts. Nothing in a design should be placed in an arbitrary manner, including the alignment of text, images, and graphic elements. Using alignment creates a clean, purposeful organization.

Proximity
Elements that are intellectually connected should be visually connected. Items, which relate to each other, should be grouped together. When several items are in close proximity to each other, they function as one visual unit rather than separate elements. This helps to organize information and reduce visual clutter. Items that are not related to each other should not be placed close to each other. Closeness or lack of closeness indicates a conceptual relationship.

DESIGN PRINCIPLES

Hierarchy
A focal point for the design or the domination of a repeating motif or design element. Where does the viewer look first? Second?

Unity/Harmony
Visual unity is a primary goal of graphic design. When all elements work together, a design is considered unified.

Balance
An ordered relationship of parts, whether symmetrical or asymmetrical; equilibrium

Symmetrical Balance
Equal visual units right and left/ top to bottom of an imaginary center point.

Asymmetrical Balance
Visual balance achieved by dissimilar visual units; for example, two or three small shapes on the right balancing one larger shape on the left.

Scale/Proportion
The relative size of elements in terms of their properties of size, quantity, and degree of emphasis.

Rhythm
Rhythm is the result of repetition; three rhythmic devices include:

1. duplication of the same form
2. two forms used alternately
3. the sequential change of a form (large to small, for example.)

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Digital Terms

Pixel
The smallest controllable element of a picture or raster image represented on a screen. Pixels are manufactured in a two-dimensional grid, and are often represented using dots or squares. Each pixel is a sample of the original image; more samples typically provide more accurate representations of the original.

Raster
An image made up of pixels. Raster graphics or images are resolution dependent, meaning they cannot scale to arbitrary size without apparent loss in quality. Photographs are raster images.

Vector
A graphics format that uses mathematical formulas to create the shapes and paths (lines) which form graphic images. Vector graphics are resolution independent and regardless of how magnified, their edges will remain crisp, clear, and smooth. This ability to stay crisp at any size, means vector graphics are great for logos, line art, and other designs that don't require complicated coloring or textures.

Resolution
The detail of an image is based on how many pixels (dots) are included in 1 square inch of space. The more pixels included in that space, the higher the resolution. Computer monitors use no more than 72 pixels per inch, however a minimum of 300 dots per inch is recommended for printing, depending on your printer.

DPI (dots per inch)
Represents the resolution of an output device such as a printer. The higher the DPI, the more pixels (dots) fit into each inch of the image. The higher the DPI, the better an image will look in print.

Pixilation
Images with a low resolution appear "blocky" or pixelated because of their lack of pixels per inch. This blocky appearance is referred to as pixilation.

PPI (pixels per inch)
Specifies the resolution of an input device (digital camera, scanner, monitor). Web pages run at a resolution of 72-96 PPI. PPI is often confused with the term "DPI"

Color

CMYK
A common color mode used for printing, also known as "process colors". CMYK stands for cyan, magenta, yellow, and black. K represents black so as not confuse it with blue. When printing in CMYK, not all colors are achievable (ex: bright blues). For this reason, spot colors (pantone colors) are used to add the necessary colors. This is a Subtractive color system, when all colors are mixed together it results in black.

RGB
A color mode used by computer screens and the web. RGB consists of red, green, and blue color combinations. Images created for web should be created in RGB mode, while images made for print output, on a printing press, should be created in CMYK. This is an Additive color system, when all colors are mixed together it results in white.

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Digital File Formats

PDF (portable document format)
A format that allows for reading and writing multi-page documents or articles across any computer setup. PDF's are a good way to write eBooks, articles, and serve as a good way to show images.

TIFF (also TIF)
An image format commonly used for high quality printing. TIFF files have large file sizes and are a great format for printing, but they not web friendly due to large file size.

PSD
Photoshop's default file extension, which stands for "Photoshop Document." A PSD file stores an image with support for the imaging options available in Photoshop.

AI
A file format developed by Adobe Illustrator for vector based graphics.

INDD
A file format for use in Adobe InDesign, a desktop publishing software which is used to create posters, flyers, brochures, magazines, newspapers and books.

PNG
An image format used for displaying images on the web. PNG images have background transparency, thought their file size is larger than GIF files and they display text more crisp than jpg images.

GIF
A Widely used graphic image file formats on the web. They have a small file size and support background transparency, but are limited to only 256 colors. GIF files do not support photographic images.

JPG (also JPEG)
Image format most commonly used for photographic images. JPGS are a "lossy" format, meaning some quality is lost to achieve their smaller file size.

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